



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,703	06/29/2001	Jeff Zentner	10014498-1	6469

7590 09/15/2006
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
CERVETTI, DAVID GARCIA	
ART UNIT	PAPER NUMBER
2136	

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MAILED

SEP 15 2006

Technology Center 2100

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/895,703
Filing Date: June 29, 2001
Appellant(s): ZENTNER ET AL.

John A. Miller, Reg. No. 34,985
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 29th, 2006 appealing from the Office action mailed April 3rd, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct. However, the grounds of rejection have changed as follows: claims 1, 3-6, 9-12, and 14 are rejected as being unpatentable over Rush in view of Kwon, claim 2 is rejected as being unpatentable over the combination of Rush and Kwon, and further in view of De Jesus, claims 15-18 are allowable.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,230,222	RUSH	5-2001
5,264,845	KWON et al.	11-1993
5,832,206	DE JESUS et al.	11-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Allowable Subject Matter

1. Claims 15-18 are allowable.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. **Claims 1, 3-6, 9-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rush (US Patent 6,230,222), and further in view of Kwon et al. (US Patent 5,264,845, hereinafter Kwon).**

Regarding claim 1, Rush teaches a key-pad including a plurality of keys (Abstract); and a key-pad controller providing a key value signal when one of the keys is activated (Abstract), said controller determining which key is activated by a process including a predetermined number of steps, wherein the process has the same number of steps regardless of which key is activated (column 4, lines 9-50), and wherein each

Art Unit: 2136

key is assigned a predetermined key press value (Abstract). Rush does not expressly disclose adding the key press values and comparing the value to another value to determine if multiple keys have been pressed. However, Kwon teaches said controller adding the key press values when the keys are pressed, and wherein the controller compares the added key value to a predetermined value to determine if multiple keys have been simultaneously pressed (column 4, lines 9-66). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teachings of Kwon to the system of Rush. One of ordinary skill in the art would have been motivated to perform such a modification to determine double-key errors (Kwon, column 4, lines 9-21).

Regarding claim 10, Rush teaches a key-pad including a plurality of keys arranged in a plurality of rows and a plurality of columns, each key being assigned a key press value (Abstract); and a key-pad controller outputting the key value to the terminal when one of the keys is pressed (Abstract), said controller determining the key that is pressed by a process including a predetermined number of steps, where the number of steps is the same regardless of which key is pressed (column 4, lines 9-50). Rush does not expressly disclose adding the key press values and comparing the value to another value to determine if multiple keys have been pressed. However, Kwon teaches said controller determining if more than one key has been pressed in more than one column, and then if only one key has been pressed, determining which key has been pressed on a row-by-row basis by adding the key press values for each key that is pressed, wherein the controller compares the added key press value to a predetermined value to

Art Unit: 2136

determine if multiple keys in a column have been simultaneously pressed (column 4, lines 9-66). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teachings of Kwon to the system of Rush. One of ordinary skill in the art would have been motivated to perform such a modification to determine double-key errors (Kwon, column 4, lines 9-21).

Regarding claim 3, the combination of Rush and Kwon teaches the limitations as set forth under claim 1 above. Furthermore, Rush teaches wherein the plurality of keys is arranged in a plurality of columns (column 2, lines 28-67), and Kwon teaches wherein the plurality of keys is arranged in a plurality of rows and a plurality of columns (column 2, lines 61-68, column 3, lines 1-5).

Regarding claim 4, the combination of Rush and Kwon teaches the limitations as set forth under claim 3 above. Furthermore, Kwon teaches wherein the controller determines if more than one key has been activated in more than one column (column 3, lines 42-59, column 4, lines 1-21).

Regarding claim 5, the combination of Rush and Kwon teaches the limitations as set forth under claim 4 above. Furthermore, Kwon teaches wherein the controller adds a counter value to a counter if a key is activated in a column (column 3, lines 60-68), and wherein the controller determines which column is being monitored for a key activation by a set bit in a digital word (column 3, lines 49-55, column 4, lines 22-42).

Regarding claim 6, the combination of Rush and Kwon teaches the limitations as set forth under claim 3 above. Furthermore, Kwon teaches wherein the controller

Art Unit: 2136

determines which key has been activated on a row-by-row basis (column 3, lines 60-68, column 4, lines 22-29, 60-68, column 5, lines 1-12).

Regarding claim 9, the combination of Rush and Kwon teaches the limitations as set forth under claim 1 above. Furthermore, Kwon teaches wherein the controller subtracts the added key value from a predetermined value to calculate a key value to be transmitted (column 1, lines 59-62, column 3, lines 1-22, column 4, lines 1-29).

Regarding claim 11, the combination of Rush and Kwon teaches the limitations as set forth under claim 10 above. Furthermore, Kwon teaches wherein the controller adds a counter value to a counter if a key is pressed in a column (column 3, lines 60-68), and wherein the controller determines that more than one key has been pressed in more than one column (column 3, lines 42-59) if the counter value in the counter is greater than a predetermined value (column 4, lines 9-66).

Regarding claim 12, the combination of Rush and Kwon teaches the limitations as set forth under claim 10 above. Furthermore, Kwon teaches wherein the controller adds the key press value for each key pressed in a particular row before moving on to a next row (column 3, lines 2-10, column 4, lines 1-66).

Regarding claim 14, the combination of Rush and Kwon teaches the limitations as set forth under claim 10 above. Furthermore, Kwon teaches wherein the controller subtracts the added key value from a predetermined value to determine the key value to be transmitted to the terminal (column 1, lines 59-62, column 3, lines 1-22, column 4, lines 1-29).

Art Unit: 2136

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rush and Kwon, and further in view of De Jesus et al. (US Patent Number: 5,832,206, hereinafter "De Jesus").

Regarding claim 2, the combination of Rush and Kwon does not expressly disclose a display and a magnetic strip reader. However, De Jesus teaches a key-pad device comprising a display and a magnetic strip reader (column 3, lines 50-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teachings of De Jesus to the system of Rush and Kwon. One of ordinary skill in the art would have been motivated to perform such a modification to provide an input means to a Point of Sale terminal (De Jesus, columns 1-2).

(10) Response to Argument

The objection to claim 3 is withdrawn.

The rejection of claims 1, 10, and 15 under 35 U.S.C. 112, second paragraph, is withdrawn.

The rejection of claims 1 and 10 are rejected under 35 U.S.C. 101 is withdrawn.

Regarding independent claims 1 and 10, they are obvious in view of Rush and Kwon.

Regarding Appellant's argument that Rush does not disclose same number of steps, Examiner points to column 4, lines 15-28 where Rush teaches that when a key is

pressed (digit "5"), the priority encoder determines the key pressed and generates a BCD output corresponding to the key pressed. Rush **"determines which key is activated by a process including a predetermined number of steps, wherein the process has the same number of steps regardless of which key is activated"** (claims 1 and 10) because each key has its value associated to it, therefore, if "5" is pressed, the value for "5" is generated ("0101"). Rush also teaches assigning a value (predetermined value) (Abstract).

Appellant's argument that "Rush does not use the same number of steps to determine which key is activated because the number of steps would be determined based on how many keys the user does press" has no relevancy to the claim language. If only one key is pressed, Rush, as explained above, generates the BCD value associated to the value of the key ("5" to "0101"), and is not based on how many other keys the user presses.

Examiner respectfully submits that Kwon determines if multiple keys have been simultaneously pressed by comparing an added key press value to a predetermined value (column 4, lines 5-42). An added key press value is determined by the logical addition of the register values and a comparison is made (logical comparison and logical summing) to determine if multiple keys have been pressed.

Regarding Kwon, Examiner respectfully submits that Kwon assigns a predetermined value to the keys (basically Kwon initializes the keys to "0" on port "PB" ("0000", column 3) and to "1" on port "PA" ("1111", column 3). The keys have a predetermined value, all the same value, but have a predetermined value nonetheless.

Art Unit: 2136

Kwon goes on to determine which key was pressed by a change in each of these port values (logically, not arithmetically, adding, "AND" operation) (column 4, lines 4-66).

Kwon teaches to compare a value to determine if multiple keys have been pressed (column 4, lines 55-66, whether the previously stored value has changed). Appellant arguments are not persuasive.

Regarding Appellant's argument that Rush is not concerned with determining if multiple keys have been pressed, Examiner respectfully points out the apparent discrepancy with Appellant's own argument on pages 6-7. It uses the one with the highest priority, but it still performs a predetermined task when more than one key is pressed.

Regarding dependent claims 3-6, 9, 11, 12, and 14, they are obvious in view of Rush and Kwon.

Kwon teaches changing a value of a register each time a key is pressed, clearly working as a counter. If the original value of the counter is "0000" ("1111"), and a key is pressed in the corresponding row (or column) a corresponding location value changes, thus counting how many keys have been pressed in a row or column (columns 3-4).

Furthermore, Kwon also teaches^{es} determining which column is being monitored because when a key is activated, a value change occurs in a digital word (the register) (column 3, lines 25-55, column 4, lines 22-42).

Regarding Appellant's argument that Kwon does not teach subtracting a value from a predetermined value to calculate a value key to be transmitted, Examiner

Art Unit: 2136

respectfully submits that Kwon performs logical summing (which includes negative numbers) to determine the key pressed, logically performing a subtraction (column 5, lines 1-25). Furthermore, Kwon **compares** values what logically result in a greater than, lower than, or equal to value.

Regarding dependent claim 2, it is obvious in view of the combination of Rush and Kwon, and further in view of De Jesus.

The combination of Rush with Kwon teaches the limitations found on independent claim 1, implementing them into the keypad of De Jesus would have been obvious.

Examiner would also like to submit that modifying Kwon with Rush's teachings of assigning a predetermined key press value to a key and determining which key was pressed by using a predetermined number of steps would also render the claimed invention obvious.

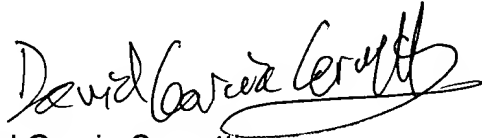
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Art Unit: 2136

For the above reasons, it is believed that the rejections should be sustained.

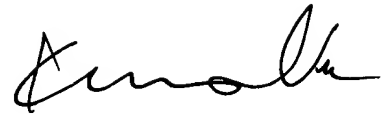
Respectfully submitted,




David Garcia Cervetti

September 6, 2006

Conferees:



KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Kim Y. Vu 

Supervisory Examiner



Kambiz Zand

Primary Examiner